

CLAIMS

1. A method for processing work items in a data processing system comprising:

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generating an interrupt in response to receipt of a work item in the system;

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servicing the generated interrupt to schedule a task for later processing of the work item, without re-enabling the interrupt;

subsequently executing the task to process the work item; and

speculatively scheduling a further task for processing of any work items that are subsequently received in the system.

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2. A method as claimed in claim 1 comprising the further steps of:

executing the speculatively scheduled task to process any work items received by the system;

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on a determination that there are no work items to be processed, enabling the interrupt; and

on a determination that there are work items to process, speculatively scheduling a further task, without re-enabling the interrupt.

5 3. A method as claimed in claim 1 wherein the work items are managed on a queue.

10 4. A method as claimed in claim 1 where in the event that further work items are received after the task is scheduled and prior to execution of the task, the step of executing the task comprises processing all the received work items.

15 5. A data processing system comprising:

20 processing means for executing tasks to process work items in the data processing system; and interrupt generating means for generating an interrupt in response to receipt of a work item in the system; wherein the processing means is operable to:

25 service the generated interrupt to schedule a task for later processing of the work item, without re-enabling the interrupt;

 subsequently execute the task to process the work item; and

speculatively schedule a further task for processing of any work items that are subsequently received in the system.

5 6. A data processing system as claimed in claim 5, the processing means being operable on a determination that there are work items to be processed to execute the speculatively scheduled task to process the work items and to schedule a further speculative task; and operable on a determination that there are no work items to be processed
10 to enable the interrupt.

15 7. A data processing system as claimed in claim 5 further including memory for storing the received work items on a queue.

20 8. A data processing system as claimed in claim 5 where in the event that further work items are received after the task is scheduled and prior to execution of the task, the processing means is operable to execute the task to process all the work items.

25 9. A data processing system as claimed in 5 wherein the interrupt generating means and processing means are embodied in a data storage controller and the work items comprise data transfer requests from an attached host system.

10. A computer program product comprising a computer usable medium having computer readable program code means embodied

in the medium for processing work items in a data processing system, the program code means comprising:

5 code means for causing the data processing system to service a generated work item interrupt to schedule a task for later processing of the work item, without re-enabling the interrupt;

10 code means for causing the data processing system to subsequently execute the task to process the work item; and

code means for causing the data processing system to speculatively schedule a further task for processing of any work items that are subsequently received in the system.

11. A computer program product as claimed in claim 10, the computer readable program code means further comprising:

20 code means for causing the data processing system to execute the speculatively scheduled task to process any work items; and

25 code means for causing the data processing system to enable the interrupt on a determination that there are no work items for processing.

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